A six month Feasibility study on CHILD SURVIVAL in An urban slum cluster :

An educational experiment in Community Oriented Medical Education (COME) through Issue-based Learning Activities

A Project with Government of India, Ministry of Health and Family welfare and Christian Medical College, Ludhiana, Punjab, India.

Financed by the USAID.

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THE CHALLENGE :

Recall the face of the poorest and the most helpless man (child) you have seen (in the urban slum) and ask yourself, the steps you contemplate are going to be any use to him (that child).

MAHATMA GANDHI.

Revised Manuscript prepared and wordprocessed by the Zachariahs.

May 24th, 1991.

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COMMUNITY HEALTH CELL

We have a dream

To train

Health Activists

Social Biologists

whose

Preferential Option

is

The Poor

The Marginalized.

In the Following pages .

You will find

CMC's Sweat, toil and tears

in the past 4 years

To make that Dream come true.

THE CORE COMMITTEE MEMBERS :

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PARTNERSHIP :

The Ash-Heap Slum Community

and

The Students and Faculty Community of :

The Medical College
The Nursing College,
The Dental College (starting in August 1991),
The School of Pharmacy,
The School of Medical Technology,
The School of Radiodiagnosis & Radiotherapy.

An issue is an event, phenomenon, statement or problem about which there are differing points of view and which require decision and action (Health, 1989). Issues such as child survival become more intense as they are emotion and value-laden and immediate action is required. Students perceive such social issues as relevant to them or for which relevance can be developed. Such social issues have substantial potential for student debate and motivation for team action.

Issues identified are the urban slums, the vulnerable and those in urgent need in the urban slums. They are, (1) underfive children and (2) pregnant and lactating mothers.

Christian Medical College established in 1893 has a long history of community orientation and compassionate caring (Reynolds C.).

Child care activities are more comprehensive for over 2 decades both in rural (Zachariah P., Cowan B. and Dhillon T. 1980) and in urban slums (Zachariah P., Sharma S.L. and Aggarwal A. 1982). Reaching the unreached (Dhillon H., Dhanoa J. & Cowan B. 1979), preventing toddler malnutrition by home-based nutrition education (Cowan B., Dhanoa J. 1983) with special emphasis on 'Exclusive' breast feeding for six months (Das D., Dhanoa J., & Cowan B. 1982).

Punjab, meanwhile, saw 2 revolutions in 3 decades - the green revolution - wheat bumper harvesting and white revolution - abundant milk production.

Is Punjab poised for a 'Health revolution' ? (Choudhrie 1990). Will CMCL facilitate this 'health revolution' : to the poorest, in the urban slums, the most vulverable and the most in need?

Why reach out to the poorest and the most needy? This too was tested by a short experiment incorporating soft sciences (such as compassion) in medical education. (Zachariah, A. 1991).

On 15th April 1991, the Principal of Christian Medical College, Ludhiana (CMCL), Punjab, India, signed an agreement with the Government of India's Ministry of Health & Family Welfare to carry out a feasibility study on child survival in slums through COME. The project is financed by USAID.

Ludhiana, an industrial city of 2 million people in the heartland of Punjab in the North West India, has 250 urban slum clusters each with a popultion of 6000-10000. Of these 250 urban slum clusters, half are 'identified', i.e. recognised by the city Municipal Corporation and have been provided with the bare minimum basic amenities such as water supply, sanitation, electricity and basic health services. The 100 or odd unrecognised slum clusters have none of these basic amenities provided and live in a state of appalling and object human deprivation. It is one of these slum clusters that is the focus of the present study.

BROAD OBJECTIVES :

To establish an education model that is relevant to India's health need, involving the whole health community i.e. the students and the faculty of health sciences such as medical, nursing, pharmacy and medical laboratory technology; reaching out to another community that is the urban slum and together :

1. Discuss and debate issues.
2. Prioritise action plans.
3. Facilitate implementation of actions.
4. Monitoring outcomes aimed at helping these special people to help themselves.

SPECIAL OBJECTIVES :

To study in 6 months the feasibility of establishing a health care

delivery system directed towards the most needy, such as under five children and mothers (pregnant & lactating) which can eventually be carried out by the community through community health volunteers (CHV) and trained Dais (Traditional Birth Attendants) in these slum clusters.

COMMUNITY ORIENTED MEDICAL EDUCATION (COME) IN C.M.C.L. :

CMCL has a long history of community orientation of medical education and is one of the pioneer institution in this field. In April 1987 the Secretary of the Medical Council of India - the Apex body for recommending, maintaining & monitoring medical education in India - and the Christian Medical College made a commitment at the meeting of the Network of Community - oriented Education Institutions for Health Sciences based in Maastricht, Holland, to make the medical education in India more community oriented, problem based and learner/student centered.

The proposed project qualifies to be called a community based learning activity since it satisfies all the four criteria laid down by WHO Technical Report Series No. 746, 1987. pp. 9 which are :

1) assignment of a family whose health care is observed over a period of time :

2) work in an urban, suburban or rural community designed to enable the student to gain an understanding of the relationship of the health sector to other sectors engaged in community development, and of the social system, including the dominance of special interest and elite groups over the poorer sections of the community or over women.

3) participation in a community survey or community-oriented

programme, such as immunization, health education of the public, nutrition, or child care.

4) supervised work at a primary care facility, such as health centre, dispensary, rural or district hospital, (Hamad B. 1991).

STS : Science/Technology/Society is a major inter-disciplinary effort in U.S. schools since 1981 in 2 major disciplines, science and social studies. Now many vocational areas such as health, industrial technology etc. are in the STS areas. The goal of STS is an informed citizenry capable of making crucial decisions and take actions - STS advocates student ownership, student questions and students' view of the world in which they live (Hickman, Patrick & Bybee, 1987; Pearson, 1988 & Yager, 1989).

If students are even to see social problems much less resolve them, our teaching must go beyond our classroom & lab to the community, emphasising observing, problem identification, creativity and use of community resources. Such a real world context focusses on useful learning (Penick, 1989). The STS focusses on many new and exciting programs in an attempt to promote this kind of learning (Penick & Meinhard-Pellens, 1984).

The primary objective of STS and issue-based instruction is that students become rational and positive civic participants in an increasingly complex social and technological world (Heath, 1989).

METHODOLOGY : Phase I - Survey of the slum & collection of Base-line Data - 4 weeks.

Each team consists of :

A medical student
A nursing student
A pharmacy student

A medical laboratory technology student.

A medical teacher and a nursing teacher or an auxillary nurse midwife will facilitate 5 teams while visiting the houses to collect baseline data. There are 38 such teams. Each team will visit 10 huts/homes once a week (every Friday morning) for 3 hours.

Base-line data is entered into each 'Family Folder' which has list of family members, information of educational status, family planning status and immunization status on one side of the folder. On the other side is the socioeconomic status. This thick folder acts as a jacket to hold separate pink cards for every underfive child in that family, yellow card for the mother if pregnant and white card for eligible couple which means any married couple with wife between 15 years to menopause. This methodology, introduced by the Department of Social & Preventive Medicine/Community Health (SPM/CH) in 1972 is time tested, updated and reformed, has met with considerable success for its reproducability.

The data from the family folder is entered into a Master Register and then subsequently entered into a computer. The appropriate software will be developed in consultation with EDP experts and programmers. See attached information.

The children under five, pregnant mothers and eligible couple are all thus identified and plan of action for intensive care and service evolved.

Identification of 20 Dais/CHV from the slum for training during phase II is also done during the later part of Phase I.

Phase II : Intensive training of community health volunteers (CHVs) and Dais (Traditional Birth Attendants) already identified from the slum cluster, for 4 to 8 weeks. CHVs and Dais identified would be

preferably mature women who have a good rapport in the slum community. The training will take place largely through health education and liberal use of audio, video and printed materials etc. The place of training will be both in the field and in the centres.

Specific and comprehensive training of Dais will include care of the new born, clearing the airways, cutting the umbilical cord with a new aseptic blade (provided to each pregnant mother, not dai) keeping the newborn warm and putting him to the breast immediately after delivery.

The dais report each delivery to the health team. The Domicillary Midwifery Staff (DMS) with ANMs from Dept of SPM/CH will be responsible for training and monitoring of Dais in the field; preferably a member from DMS being present with the dais in the slum to assist and monitor the first few deliveries.

Since the huts in the slums are small and not very clean, the slum community will arrange to make a clean, big hut, in the slum itself, to be used exclusively for delivery.

The community Health volunteer (CHV), preferably again a woman, will help the health service team during clinic visits and refer pregnant mothers and children for weekly and eventually monthly visit. CHV will be the liason between the health team and the community. CHV will accompany patients refered to PHC in Jamalpur situated 1 km away or to District Civil Hospital or to CMC hospital 3 km away if necessary.

Health services provided in the slums by ANM/CHV/DAIS :

1. Treatment of minor ailments and referal of more complicated cases.

2. **Antenatal care :**

a) Identify every pregnant woman and record according to the expected date of delivery (EDD).

b) Identify 'High Risk' mothers for special care.

c) Vaccination of pregnant women with two doses of tetanus toxoid at an interval of atleast one month and bring them to the antenatal mobile clinic for regular check up.

d) Administer iron & folic acid tablets.

e) Advise to eat more of whatever is available in the home.

f) Provide food supplements in the last trimester if needed.

g) Non-formal education aimed at improving the functional literacy of families in slums.

h) Health education on personal hygiene, care of breasts, breast feeding & child care.

i) Identify women for family planning and motivate them to take family planning services at the first referal centre.

3. **Care of the infants**

a) Weekly weighing of the newborn and health education of mother concerning growth monitoring of her child.

b) ensure exclusive and adequate breast feeding with demonstrable end i.e. doubling of birth weight or attainment of 6 kgs at 4 months.

c) provide mothers with oral rehydration solution (ORS) packets with instruction on how to prepare the solution and when to give it to their children. Teach the mothers how to prepare home made oral rehydration solution when ORS packets are not available.

4. Immunization against six preventable diseases under universal immunization programme (UIP)

5. Health education on weaning diet and food supplementation, if necessary, for children aged 6 to 36 months.

6. Detection, management and monitoring of malnutrition in under five children with the help of growth chart.

7. Management of common & chronic diseases.

During weekly visits common diseases are diagnosed and managed in the hut or mobile slum clinic. Those requiring routine investigations are referred to the Health Centre in Jamalpur. Those requiring emergency or tertiary care are referred to city Civil General Hospital or CMC Hospital. The CHV will facilitate this process and ambulance or transportation will be made available. If the mothers are admitted away from their huts, the CHV will help in maintaining the family as undisrupted as possible by arranging baby sitters, arranging other children's care and so on.

The TB suspects are identified during baseline survey and CHV will help in liason work with the District TB Control and Sureveillence department - a member of which will make once a month visit to the slum to register and monitor TB suspects/patients. He will also provide free anti-TB drugs, follow up the patients and give health education.

The ANMs will be visiting the Slum Cluster two or three times a week to provide continuing in-service training to the CHVs and Dais and monitor their progress. Each student team along with the facilitators who were initially involved in this training programme will also monitor the whole process once a week and this whole exercise will be an important learning activity.

ANALYSIS AND EVALUATION OF DATA

The data will be

1) Affective, soft data, 2) Emperical, hard data.

The Affective soft data will be

1) Questionnaire, 2) Oppinionnaire etc.

The students, the faculty and randomly chosen members of the community will evaluate one another and the project through questionnaire and opinionnaire. There will be continuous as well as summative evaluation.

The appropriate statistical analysis will be carried out.

Evaluation of the innovative curriculum will be done and expertise from following sources is being sought :

1. The Steering committee constituted by the Indian Association for the Advancement of Medical Education (IAAME) to help CMCL to implement and evaluate innovation in medical education with members : Dr. J.S. Bajaj, Dr. Ramalingaswamy and Dr. Harcharan Singh. See page : 25 item 25.

2. Specific recommendations of Friedman C.P., deBliek R., Greer D.S., Mennin S.P., Norman G.R., Sheps C.G., Swanson D.B. and Woodward C.A. 1990) on the five important outcomes of curricula which are :

a) Psychosocial and interpersonal skills cluster.
b) Continuing learning cluster
c) Satisfaction cluster
d) Clinical problem solving
e) Cost of education.

3. Karolinska Institute, Stockholm, Sweden and Dr. Dick Martenson of the Department of Research & Development in Medical Education who is a specialist on education development in established medical schools. (Martenson, D. 1989).

4. Harvard Medical School, Boston, MA, USA. The Dean Daniel

Tosteson's 'The New Pathway' experiment.

5. WHO, SEARO, New Delhi, through the Government of India, Ministry of Health & Family Welfare. Dr. Palitha Abeykoon of the Medical Education Unit of the WHO SEARO recently returned from Harvard Medical School after doing a Research Study on 'Educational developments in established medical schools.'

FUTURE PROSPECTS :

Christian Medical College is committed to carry on this unique educational experiment with the 'Child Survival' as the grand unifying Theme (GUT), of bringing all the students and teachers of all the faculties in the Health Sciences to learn together as a team, a very value-emotion-laden issue the 'Survival of the Child' in an urban slum.

Efforts are underway to involve students and teachers of the Punjab Agricultural University (PAU) 5 kms away, well known for the green (wheat) revolution of the 70's and white (milk) revolution of the 80's.

The faculties of PAU to be involved are :

1. Agriculture
2. Agricultural engineering
3. Sociology
4. Education
5. Political Science
6. Journalism

The ensuing intersectorial discussion and debate by these students on the health issues is just a trigger to initiate a 'Chain reaction' to identify social, economic and political issues to take decisions and actions to deal among other issues, what Dr. Mahler

calls 'The sin of eniquity or inequality'.

These efforts are in line with the Alma Ata Declaration that emphasizes : 1) Equitable distribution of health services ; 2) Community participation; 3) Appropriate technology and 4) Intersectorial approach.

In August 1984 the Government of India and UNICEF together reviewed the urban basic services programmes that was then being implemented in 42 towns in India. The UNICEF Urban Basic Services programme emphasizes the following priority areas : malnutrition; women's development activities; pre-school, day care and early childhood development activities; responsible parenthood and family planning services; support for abandoned and disabled children and water and sanitation. The Government of India (the Ministry of Urban Development) decided to expand UBS programme to 295 towns during the seventh Plan Period, i.e. 1985-1989.

The Ministry agreed to share programme costs with the state Government, local bodies, and UNICEF (T. Harpham, T. Lusty & P. Vaughan (Eds)) In the shadow of the city: Community health and the urban poor. Oxford University, 1988 p. 200).

Ludhiana is one of the 295 towns in the UBS programme covering half of the 250 slum clusters that the reorganised. But how about the 100 or more unrecognised and unreached slums unreached by UNICEF and Govt. of India (the Ministry of Urban Development)? It is one of these slum clusters that is the focus of the 'Child Survival' Project. Children and mothers in critical need cannot wait.

The child survival project in urban slum is also an attempt to trail blaze a new paradigm for medicine' ("The New Pathway at Harvard Medical School, Annual Report, 1989). Rather it is a new paradigm in community oriented medical education (COME).

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With few exceptions, researchers have observed remarkably robust negative association between income and all-cause mortality and between education and mortality at all levels of socioeconomic status (SES). This 'SES-poor health rule' provides opportunities for investigation and intervention, opportunities to develop effective programmes in health promotion (Bunker & Gomby, 1989).

By this Project, the Christian Medical College, Ludhiana is "seriously committing itself to producing a community oriented, socially conscious, primary health care provider who would be competent to plan and implement health care services to meet the needs of a total population in any defined geographical area.

The social context could be one or more of these options :

1. A team member of a health/development agency working for people.
2. A team member of the existing governmental primary health care system.
3. An individual community physician competent to practise and provide comprehesive health care with a suitable team" (Narayan, 1991) or choose to specialize in any field of health sciences.

Perhaps, this model when fully operational could herald the 'Coming birth of an educational system' (Brandwein, 1990) and a new breed of physician... a social biologist (Ramalingaswami, 1968) who through issue-based learning activities in a team learns to become a 'health activist' (Choudhrie, 1990) to bring about the goal of health for all giving even to the most deprived community, a fighting chance.

It is important for every medical school to understand its situation in respect to what society expects and requires of the school's own community and its graduates, in terms of social

development on the one hand and the technological and scientific developments on the other (White, 1988). The Christian Medical College established in 1893 is getting ready to celebrate a centuary of existence and this Project is a chance to introspect, debate, discuss issues, seek new direction and action. Experimenting and implementing a relevant and responsible alternative model for health sciences education where 'health promotion and improvement of the health and quality of life of persons particularly of low socioeconomic status (SES)' (Tarlov, A.R. and Kehrer, B.H., 1989) has the highest priority.

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ACKNOWLEDGEMENTS

The Government of India, Ministry of Health and Family Welfare for the promptness and continuing encouragement in carrying out this Feasibility Project. Our deep appreciation goes to Mr. J.C. Jetly, Secretary and Smt. Vineeta Rai, Joint Secretary and Mr. J.P. Misra, Deputy Secretary, Dept. of Family Welfare.

The United States Assistance for International Development for the Financial support and keen interest taken by Mr. John Dumm and Mr. A.K. Raman.

Dr. B. Cowan former Principal of CMCL and now Consultant in Community Health for preparing the first draft of the Project which is now incorporated into this larger version.

Dr. Saramma Thomas, Consultant in Community Health, New Delhi for her helpful input.

Dr. (Mrs.) M. Dean, Principal and Professor of Nursing for taking up and carrying into completion, many mini-projects in the slums with the Nursing Students which paved the way for the present Project.

Mr. Honey Williams, Medical Social Scientist and his team for the good rapport they have with the people of the Ludhiana slums.

NB : Mr. Surinder Pal in helping in word processing and preparing the document.

Annotated Events related to Innovation in Medical Education at Christian Medical College, Ludhiana, Punjab, India, from 1987.

1. The Director, Dr. A.V. Choudhrie deputed Dr. Alex Zachariah who attended the Network Conference in Maastricht, Holland in March 1987 where a plan of action to explore the possibility of introducing COME & PBL curriculum was submitted. Subsequently, visited Karolinska Institute (Hospitality: kindness of Dr. Dick Martenson & family.). Stockholm. Also visited WHO Headquarters and Christian Medical Commission, World Council of Churches, Geneva.

2. The Principals of CMC and DMC attended the Network conference in Bersheba, Israel in May 1987 and formal and informal discussion to make these two medical colleges in line with the Network objectives was held.

3. Dr. Rex M. Heyworth Ph.D. a specialist in cognitive science study from the School of Education. The Chinese University of Hong Kong, Shatin, Hongkong conducted taped-interview of newly admitted students, 1-2 hours per student and submitted a report, Medical Education Reform : Initial Considerations - A Discussion report.

4. Dr. Jagdish Rai MD, Professor and Head of Microbiology Department visited McMaster University in Hamilton, Ontario, Canada in August 1987 and returned as a new convert in PBL and small group tutorials system. With an evangelistic zeal, he introduced the Small Group Tutorial system totally replacing the Lecture system of diadactic teaching. This innovation is appreciated by the faculty, students and the university examiners. In April 1991 Dr. Jagdish Rai also introduced the OSPE in the practical examination in Microbiology.

5. The medical students admitted to CMCL were given a 5 week orientation to COME, PBL and small group dynamics and both the students and the faculty enjoyed the experience.

6. The experience was shared in the Network conference in Pattaya, Thailand in September 1987 where 4 from the faculty and 2 medical students gave 5 poster presentations.

7. Dr. Vic Neufeld, the Chairman of the Network and Associate Dean of McMaster University visited CMCL soon after the Pattaya conference and encouraged CMC and DMC to furthur develop the COME & PBL model advocated by the Network.

8. Dr. J.J. Guilbert of the WHO, Geneva visited CMC in November 1987 and suggested that a Parallel Track is a possiblity in the near future.

9. Dr. Rebecca Jackson from University of new Mexico, in Albequerque, NM in USA spent a week in Dec 1987 introducing the Problem Based Learning (PBL) to the faculty in CMCL.

10. A workshop was held in the Medical Council of India Headquarter in New Delhi in January 1988 where Dr. Vic Neufeld recommended that in some medical schools in India the COME/PBL curriculum could be introduced. This meeting was attended by representatives from WHO, Deans of 4 medical colleges, health service representatives and so on. The training of the faculty was considered a priority.

11. 1988 was the year of exposing some of our faculty to some of the institutions who have successfully carried out the COME and PBL in their medical schools.

Dr. Betty Cowan, former Principal and presently, consultant in Community Health along with Dr. V.K. Satija, Prof and Head of

Medicine attended the Visitors' Workshop in McMaster University in June 1988.

Dr. Manorama Verma, Prof and Head of Paediatrics attended the Workshop in New Mexico, Albequerque and the workshop in McMaster in 1988.

Dr. Choudhrie, the Director and Dr. Zachariah, the Principal visited :

Overseas Development Agency of the British Council in London UK in October 1988 and had encouraging discussion concerning the retraining of the medical doctors to give them Primary Health Care skills and knowledge leading to the Master of Public Health Degree and starting a new innovative medical curriculum which will be community oriented/based, problem based, activity based learning and start this innovative curriculum by 1990.

Held discussions with the Leeds University, Community Medicine Department and Nuffield Institute of the Leeds University and it was agreed to start collaboration with the Leeds University to start an MPH programme in Ludhiana and render all assistance in starting the innovative medical curriculum.

Subsequently, visited Network Headquarters in Maastricht, Holland, the Karolinska Institute in Stockholm (Courtesy Dr. Dick Martenson). Then visited Egypt, the Faculty of Medicine, Suez Canal University in Ismailia where a very successful experiment in CBE and PBL was introduced in 1981 after a decade of national and international preparation and it was evident thath the Suez Experience is very relevant and appropriate to the Indian Health Scenerio. The Faculty of Medicine of the Suez Canal University has agreed to help CMCL in developing a COME and PBL curriculum for the Proposed Parallel Track Project.

12. Dr. Esmmat Ezzat, Dean of the Faculty of Medicine, the Suez Canal University, Ismalia, Egypt visited CMCL 15th to 17th of January 1989 and held a series of small group discussion with faculty and students on her experience and recommendations on innovation in medical education based on Suez Canal experiment. Her dynamic and charismatic personality and presentation excited and enthused the faculty and students.

13. Dr. Ezzat along with 7 faculty of CMCL proceeded to Delhi on 17th for a special invitational meeting in MCI in New Delhi on 18th January 1989 where Dr. Vic Neufeld, Associate Dean of the McMaster University and Dr. Palitha Abeykoon of SEARO of WHO took part in deliberations on Innovation in Medical Education in India. The recommendation at the end of the discussion was to experiment with innovation in medical education in a few medical schools within the existing recommendations of MCI and there is ample scope for this to begin within the existing framework. The respective medical colleges through their universities must present their detailed documents on innovation to MCI which will be scrutinized by national and international experts on medical education before it is forwarded to the executive and general body of the MCI.

14. The national conference of the Indian Association for the Advancement of Medical Education (IAAME) was held in CMC Ludhiana from Feb 3rd to 5th, 89 and the Edinburgh Decleration was circulated, discussed and a commitment to move towards implementing the recommendation was enthusiastically taken. For the first time a senior faculty member was elected to the executive committee of the IAAME and that was Dr. M.C. Deodhar, Prof and Head of the Department of Surgery who was the organizing secretary of the IAAME Conference in CMC Ludhiana.

15. Dr. Ezzat while in Delhi again to attend a WHO meeting in March 89, held 2 days of in-depth discussion with Dr. Betty Cowan,

Prof. Verma, Head of Paediatrics, Prof. Saha, Head of Anatomy & Prof. Natu, Head of Pharmacology concerning some aspects of curricular development.

16. Dr. B.N. Koul, Director of distance Education in the Indira Gandhi National Open University, held in CMCL, a 2 day Workshop in May on preparing Self Instructional material and the faculty participation and enthusiasm was considerable.

17. The Faculty has met in April and again in May to discuss innovation in Medical education.

18. Dr. B. Cowan attended a workshop on "New Methods in student assessment and skills training" July 3rd to 7th, 89 in Maastrict, Holland. Dr. Cowan also met Professor R.M. Harden in the Centre for Medical Education, University of Dundee, Scotland in August, 89 and had useful exchange of views and ideas on the curent educational scene.

19. Prof. S. Mookerjee was the first visitor to Suez Canal University after Dr. Ezzmat's visit to CMCL in July 89 and interacted with the faculty and students on the Suez Canal experiment in innovation in medical education.

20. A core group of interested faculty numbering 15 to 20 representing all the teaching departments met every Thursday for upto 2 hours to discuss different aspects of medical education.

21. Dr. Daleep Mukerjee, the General Secretary of CMAI co ordinated a consultation in Bangalore on August 4th and 5th, 89 to discuss and bring together Christians in medical education among the three Christian medical training institutions in India, i.e. CMC Vellore, CMC Ludhiana and Miraj Medical Centre. The CMC Ludhiana team was lead by Dr. A.V. Choudhrie, who is also the President of the CMAI and the other faculty members were Dr. (Mrs.) Prema Zachariah, Prof

and Head SPM & CH, Dr. E.B. Crowell, Prof of Medicine, Dr. (Mrs.) Susan Crowell, Prof & Head of Biochemistry, Dr. Kamal Masih, Lecturer in pathology, Dr. P.C. Alexander, Registrar in Paediatric Medicine. Dr. Ravi Narayan of the Community Health Cell, Bangalore, delivered the key note address and set a very good millieu for discussion.

22. During Sep-Oct.89 three senior faculty members, Dr. B. Cowan, former Principal and now Consultant, Community Health, Dr. J.C. Saha, Prof and Head of Dept of Anatomy, Dr. M.V. Natu, Prof and Head of Dept of Pharmacology spent 2 weeks in the Faculty of Medicine, Suez Canal University, Ismailia, Egypt to learn more about their successful experiment in community based, problem based and learner centered medical education and training. The visit was made possible by a grant from the Ludhiana British Fellowship, London.

23. The Medical Faculty of the Panjab University discussed on December 29th, 89, the proposal by CMC and DMC to start an innovative, experimental curriculum starting with 10 additional students as a parallel track and the Medical Faculty appointed a committee to look into the details of curriculum etc and bring its report.

24. Honourable Shri R. Venkataraman, President of India, gave the B.C. Roy Silver Jubilee Research Award to the principal Dr. Alex Zachariah, the Christian Medical College, Ludhiana on December 21st, 1989 in recognition of all the efforts in CMC for innovation in medical education.

25. The XXIX annual National conference of the Indian Association for the Advancement of Medical Education (IAAME) was held in Nagpur from Jan 5th to 7th and six senior faculty members and six students attended the conference and presented papers, participated in debates etc on innovation in medical education.

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A Steering Committee was constituted to help CMC to implement innovation in medical education and the members are Dr. J.S. Bajaj, President, IAAME, and Consultant to Govt of India on medical education, Dr. Ramalingaswami, Special Advisor to Executive President, UNICEF, New York and Dr. Harcharan Singh, Member, Planning Commission, New Delhi.

26. Dr. M.V. Natu, Prof & Head Dept of Pharmacology, Dr. Daljit Singh, Prof of paediatrics and Dr. Tejinder Singh, Lecturer in Paediatrics attended a Workshop on "Medical Education-Assessment Strategies" held at the All India Institute of Medical Sciences, in New Delhi in march 1990.

27. Prof. Daljit Singh and Dr. Tejinder Singh successfully completed a certificate course with outstanding grade, in Evaluation Methodology and Examinations' held by Association of Indian Universities in March 1990.

28. Dr. Ravi Narayan of the Community Health Cell in Bangalore, visited us for 2 days in Feb, 1990 and interacted with the faculty and the students who found Dr. Ravi Narayan a very amiable expert on community orientation of medical education.

29. The First Workshop on Fundamentals of 'Medical Educational Technology' was held in CMCL with Prof Natu, Prof. Daljit Singh and Dr. Tejinder Singh as the Resource persons in May 1990.

30. Dr. Alex Zachariah and Dr. (Mrs) Prema Zachariah were invited to be speakers in the International conference of the Hospital Christian Fellowship in Exeter, England from August 6th to August 12th. On August 13th, both visited the Community Health Department of the Leeds University and had very valuable discussions with Prof. Gerard Richard and Dr. Peter Cox.

31. In October 1990 following five faculty attended the 2nd

International Symposium on Problem Based Learning held at Yogyakarta, Indonesia. Dr. AB Thomas, the Vice-Principal and Professor of Plastic and Microvascular Surgery, Dr. A. Bhattacharjee, Prof. & Head of Physiology, Dr. (Mrs) Prema Zachariah Prof. & Head of Dept. of SPM/CH, Dr. Uma Arora, Lecturer in Biochemistry and Dr. M.V. Natu Prof. & Head of Pharmacology, who presented a paper 'Learning by Problems in discipline-based education : a proposal for innovation in traditional medical schools'. This trip was made possible by a generous grant from AGEAS, Switzerland through Dr. Tony Wanner MD.

32. Second Workshop on 'Fundamentals of educational technology' was held in October 1990 by Prof. Natu, Prof. Daljit Singh & Dr. Tejinder Singh as resource persons and those of the pre and para clinical departments who did not attend the 1st workshop attended this one.

33. The workshop on 'Problem based learning in undergraduate medical education' was organized at AIIMS, New Delhi and Dr. M.V. Natu and Dr. Tejinder Singh were deputed to attend the workshop.

34. In January 1991 the first indegenous Workshop on Problem based learning (PBL) was organized with resource persons wholly drawn from within the faculty with Dr. Manorama Verma as Coordinator along with Dr. V.K. Satija, Dr. B. Cowan, Dr. Beverly Booth, Dr. T.M. Jaison, all of whom have been to either or both New Mexico and McMaster centres.

35. Third Workshop on Medical Educational Technology was held in April 1991 in which senior teachers including six from Dayanand Medical College participated. Uptill now, 70 teachers inncluding 20 professors have been trained. Prof. Natu, Prof. Daljit Singh and Dr. Tejinder Singh were the resource persons.

36. Dr. Tejinder Singh completed a programme leading to the award of Diploma in Training and Development.

37. In April 1991, Dr. Alex Zachariah was invited to give a Guest Lecture on Innovation in medical education in India : the CMC Experiment' to the XVII Annual Conference of the Association of Clinical Biochemists of India in Shimla, Himachal pradesh, India. Dr. Tejinder Singh was the Co-author of the paper.

38. The perceptions of the students and the faculty towards course, curricula and training methods were obtained using questionnaire and oppinionnaire. Total annonymity was maintained and students enjoyed giving this feedback covering all the pre and para clinical subjects. In addition, all the teachers were individually evaluated by the students. This helped in not only making our training requirements clear but also brought a subtle and and in some instances, substantial change in the attitude of faculty towards teaching. This was done in October 1990 and again in April 1991. Prof. Natu, Prof. Daljit Singh and Dr. Tejinder Singh under took the evaluation and analysed the data.

39. In March Dr. Manorama Verma, Prof. & Head of Paediatrics visited the Harward Medical School and saw the 'New Pathway' curricular innovation at work. This visit was made possible by Dr. Rev. Charles Reynolds. Executive Director of the Ludhiana C.M.C. Board USA., Inc.

Issue Based Education : Community Oriented, Issue-Based Learning Activities (COIBLA) : A new Paradigm in Health Sciences Pedagogy.

Alex Zachariah, Prema Zachariah

Abstract

We propose a new paradigm, 'Issue-Based education and community oriented, Issue-based Learning Activities (COIBLA) in place of Problem Based Learning (PBL) pedagogy for Health Sciences education and curriculum, more so for developing countries like India.

An issue is an event, phenomenon, statement or problem about which there are differing points of view and which require decision and action'. Medical sciences mostly emulate the hard and precise bipolar approach of 'yes or no' or 'right or wrong' which has usually only 'one point of view' that is so characteristic of the 'hard sciences' such as physics, chemistry and so on.

However, health issues are multi polar and the term 'issue' may be more comprehensive and appropriate when applied to all complex communities.

Besides, COIBLA combines community orientation with issue based learning activities and thus has a larger base and frame of reference.

Science/Technology/Society and Issue based education and learning activities have completed a decade of experimentation in the U.S.high schools and has made science learning more relevant,

responsive and exciting.

In developing countries like India, health issues are no longer medical or 'hard sciences' problems, but are issues having a greater intersectorial connotation and application.

Christian Medical College, Ludhiana, Punjab India, affiliated to Panjab University is field testing with COIBLA from March this year in a 'A six month feasibility study on child survival in an urban slum cluster as an educational experiment in community oriented medical education (COME) through issue-based learning activities.'

This study is unique in that the students, interns and teachers of all the faculties i.e. medical, nursing, pharmacy, medical laboratory technology etc. in this medical colleges is involved in this health team building through community oriented, issue-based learning activities (COIBLA) a New Model in Community and Uiversity Partnership and the preliminary results will be presented at the conference.

Management of Learning in Medical Education

Tejinder Singh, Daljit Singh, M.V. Natu, Alex Zachariah

ABSTRACT

This communication reviews some of the common principles of managemnt, specially those related to motivation and tries to relate them to teaching-learning system. It also offers some simple solutions to improve students' motivation to learn.

Inservice training programme for medical teachers in educational technology.

Tejinder Singh, Daljit Singh, M.V. Natu, Alex Zachariah

ABSTRACT

An inservice training workshop in educational technology was

organised for teachers of Christian Medical College, Ludhiana. Course faculty was formed by local teachers, who had been exposed to these concepts on earlier occasions. A pre-test revealed complete ignorance about common educational concepts.

A variety of topics, of use to teachers, were covered. Emphasis was laid on group discussions and participative methods, keeping lecturing to a minimum. The workshop was well received. A post test showed a statistically significant improvement in knowledge of the teachers.

Authors believe that it is possible to organise such workshops at local level, which will help in spreading the knowledge of educational technology to a large number of medical teachers.

Evaluation of Small-group learning by objectives in teaching of Pharmacology.

M.V.Natu, Tejinder Singh, Daljit Singh, Alex Zachariah

ABSTRACT

Small group learning by objectives (SGLO) was recently introduced by the department of pharmacology at C.M.C., Ludhiana. This communication describes the students' attitude to SGLO as compared to traditional lecture method.

The attitudes were assessed on 6 basic themes viz. better retention, development of study-skills, autonomy in studying, interpersonal relationship, problem of weak students and efforts involved. Students rated SGLO significantly more than lecture method on all the aspects. In addition, motivating potential score (2) was calculated for both methods. The difference was statistically significant. There was no difference in the ratings of higher, middle or lower ability group students.

Hawthorne effect - a tool for improving the quality of medical education ?

Tejinder Singh, Daljit Singh, M.V. Natu, Alex Zachariah

ABSTRACT

Hawthorne effect is a famous phenomenon in industrial psychology and states that merely observing a person changes his behaviour. To improve the quality of medical education at CMCL, we tried to invoke this effect. This was done in 2 stages. Firstly, the faculty was asked to rate itself regarding teaching skills. Simultaneously, the students were asked to rate the teaching and counselling skills of individual teachers. Based on students' ratings, a student acceptability index (SAI) for each teacher was calculated. The results were discussed with the faculty. Without providing any further input, this exercise was repeated after 6 months for same group of teachers. The SAI ratings showed a statistically significant ($p > 0.001$) improvement over previous ones.

Significance of the findings and practical implications are discussed.

Promoting research in medical colleges.

Tejinder Singh, Daljit Singh

ABSTRACT

Research is considered an important input, not only for improving the quality of patient care but also for enrichment of teaching. Unfortunately, a very low priority is accorded to research in most of the medical colleges. Whatever research is done is more like re-search; in other cases, it is totally irrelevent to the needs of our country.

The medical faculty should view research from an altogether different perspective - not all research is destined to get a Noble Prize. It should be seen as an attempt to put the cognitive faculties to maximum use. The work done should be submitted to a wider scientific audience by means of publications. When medical teachers engage themselves in such an endeavour, the students also inculcate the habit of being systematic in their work and approach to patients. This will also promote scientific temper among medical students.

Various strategies to promote need based research are discussed.

Managing Change in Medical Education: Step One

Tejinder Singh, Daljit Singh, M.V. Natu, Alex Zachariah

ABSTRACT

Attempts were initiated about a year back at CMC, Ludhiana to make medical teachers receptive to change in medical education. This commuication describes the stage of 'unfreezing' in terms of Levin's theory of change. The aim of this exercise was to make teachers aware of their own shortcomings in terms of teaching skills by their own efforts. A self evaluation questionnaire containing items pertaining to knowledge and skills of educational technology and attitudes to student counselling was administered to entire teaching faculty of pre and para clinical departments. Based on responses, Teacher self-appraisal index (TSI) was calculated and discussed with the faculty.

Importance of an exercise of this kind and its practical utility is discussed.

Education and training for making a good family physician.

Tejinder Singh

ABSTRACT

There is no ambiguity that medical education in India leagves much to be desired. The curriculum and course content has no bearing whatsoever to the later requirements of an undergraduate. Specialists and super-specialists dominate the teaching, and try to pass all the knowledge to the student which he doesn't need in later years. Neither is there any attempt to teach practical procedures like IM injections and draining an abscess to the student.

It is suggested that 'Systems approach' be followed in planning the curriculum devoting more time to common problems rather than rarities and diagnostic enigmas. A plea is also made for involving senior family physicians for teaching and training undergraduate students.

Learning by Problems in Discipline Based Education : A Proposal for Innovation in Traditional Medical Schools

M.V. Natu

ABSTRACT

Due to definite restraints existing in a traditional medical school, a completely, 'Problem-based' education may not be possible, even for the development of a parallel track in some existing institutions.

However, students can be presented, properly selected patient problems, health delivery problems, medical science problems and

research problems to act as stimulus for learning in the basic sciences even during discipline based education. Each properly selected problem can stimulate learning in a particular area of discipline.

Such an exposure to different problems, would also help in developing problem solving skills and an integrated body of knowledge-which are the basic concepts for problem based education. Further, the process of selection of such problems by the faculty, may eliminate the unnecessary, inert material of the course content in discipline based education.

The selection of problems may be such as to introduce the concepts of community orientation. Common health problems observed in and around the local area may be presented to the students, according to the need for particular discipline and also according to the depth of understanding developed by the medical student at that particular level of education. This means the designing and development of these problems would have to be on a different pattern and framework as compared to that for problem based education and therefore, the term 'Learning by problems' is used in the title of this paper.

Thus, an innovative approach seems to be possible, which can utilize the positive aspects of both the 'Problem-based education' as well as that of the 'Discipline based education.'

Introduction of Community oriented learning by objectives (COLBO) and patient management problems (PMP) in The Existing University Curriculum for Medical Education in India.

M.V. Natu

ABSTRACT

The existing university curriculum for medical education all

over India is discipline based and this appears to be an obstacle for innovative changes like Problem based, Student centred learning. However, even in the discipline based education some modifications are possible which would be acceptable to the universities and would begin a shift towards community oriented, problem based learning.

Universities are becoming aware of the importance of their role in improving the health of people. The educational and scientific endeavours, therefore, can be community oriented. The different disciplines in medical education may contribute to this, by focusing attention on the priority health problems both at local and national levels. The international problems like AIDS and drug abuse would also need consideration.

Universities can work out a list of such priority health problems which should be dealt with by different disciplines according to the related level of medical education. Each discipline, then, would develop learning objectives and would also present the learner with relevant patient management problems to be discussed in small groups for a detail and complete understanding of the matter and for the future use of problem solving skills in the community.

Attempts are being made at the Christian Medical College, Ludhiana (CMC,L) and particularly so in the department of Pharmacology in this direction. For example, in view of the serious problem of iron deficiency anaemia in the Indian community, a different type of educational programme was planned and executed for the senior third year students. Initially they were shown a slide/sound presentation entitled" PUT THE IRON BACK INTO OUR PEOPLE" prepared by WHO and UNICEF. The purpose of this presentation was to highlight the problem of anaemia in India. Following the presentation, a brief discussion was evoked and on this background the students were presented with a list of learning objectives related to the topic of HAEMATINICS and these were explained to them. Then

the total class was divided into small groups. Each group once again discussed the topic and objectives in presence of a facilitator-teacher and individual students were encouraged to read relevant material from text books.

Next day, the same groups met again for further discussion. This time, they were also provided with a formative assessment test in the form of multiple choice questions and some simple patient management problems related to the topic. In general the programme was appreciated by students and teachers. Other topics are also being discussed on similar lines.

Further, it is proposed that in consultation with community medicine department and different clinical departments a list of priority health problems can be evolved and would be included in the existing curriculum after an approval from the university.

This should serve as a model for introducing community oriented learning by objectives (COLBO) and patient management problems (PMP) in the existing university curriculum for medical education in India.

Acknowledgements :

1. Network of Community oriented Educational Institutions for Health Sciences based in Maastricht, Holland.
2. Churches, friends of CMCL in UK, Germany, Sweden, Holland, Canada and USA.
3. ODA of the British Council.
4. SIDA Swedish International Development Agencies.
5. DANCHURCH AID, Copenghagen.
6. Christian Medical Commission, World Council of Churches, Geneva.
7. Ludhiana British Fellowship in London.
8. CMC Ludhiana Board in New York USA.
9. CMC Alumni Inc. in USA.
10. The Christian Medical Association of India, New Delhi.
11. Punjab Agricultural University, Ludhiana.
12. The Indian Association for Advancement of Medical Education, New Delhi.
13. Faculty of Medicine, Suez Canal University, Ismailia, Egypt.
14. AGEAS, Switzerland.
15. Community Health Department of the Leeds University. UK.

SIX WEEKS INTO THE 'CHILD SURVIVAL' PROJECT.

AN EARLY REPORT

After signing the agreement on April 15th, the next two weeks saw intense preparation and planning for the Project.

Climatically, one could not have chosen a worse time ! The intolerable heat, over 42 degree Celsius at times, could not dampen the students, more surprisingly, the faculty's enthusiasm.

The first field trip took place on the 3rd of May, 1991. At 8-30am, 38 pairs, a medical and a nursing student alongwith a medical or nursing teacher or a field staff like ANM's of the Dept of SPM/CH visited upto 5 families in the treeless, shadeless Ash-heap slum. By 11-30 all returned to the home base as the heat was just too much !

The second visit was on May 10th and the students and the faculty went to the field by 7:30 am to finish the visit before the day got too hot ! Up to ten families/huts were visited.

The third visit was on May 17th and 20 pharmacy students joined the team and each team again tried to cover upto 10 families gathering the baseline data.

The fourth and the final field visit to gather baseline data was scheduled for May 24th and this time 28 medical laboratory technology students were expected to join the teams. Then tragedy struck and May 24th field visit was postponed in deference to Shri Rajiv Gandhi's creamation.

After the first two field visits, on May 3rd and 10th, the medical students and the facilitators met in the afternoon, in the Dept of

SPM/CH for feed-back sessions. The students and the faculty divided into 6 groups and discussed in 'small groups' their experience and colated the data and presented their findings to the total group. Suggestions and recommendations were taken note of. Some faculty felt that the Feed-back session is beginning to 'polarize and gel' into a Dept of SPM/CH activity.

It was time for change in strategy ! It was decided to have a Facilitators' meeting a day before the field visit to know and understand what one is facilitating as most of the teachers were drawn from disciplines other than SPM/CH. Since this project is an effort to make the whole medical school community oriented, the facilitators' meeting and the feed-back meeting must rotate through all departments in all faculties.

On May 17th, both the Facilitators' meeting and the Feed-back meeting took place in the Department of Anatomy; traditionally a very difficult and rigid department in all medical schools ! The students and the faculty were thrilled to see and feel the New Image of the Anatomy Department buzzling with discussion of 'the living' around the dissection tables !

From the very first week the baseline data is being entered into the Master Register by the Field staff by hand and the data is being checked, analysed and supervised by the senior faculty of the Dept of SPM/CH for accuracy and if need be, visits are being made to the field to ascertain accuracy.

May 31st, 1991 was the fourth and final day of Field visit to complete the collection of Base line Data. The nursing students, the pharmacy students and the medical laboratory technology students in pairs (medical students are on summer vacation) alongwith facilitators went off in 2 buses to the field at 6:45 AM. They enthusiastically visited the families and gathered the data. In the afternoon they

gathered in 7 small groups and colated their data and presented to the whole group. The facilitators meeting the previous day and the feed bak meeting the same day was held in the Department of Pharmacology.

It is an incredible sight to see Professors, Heads of Teaching departments going around with the students in the slums; most of them on their first visit to any slum !

Vignette 1.

On May 16th Dr. Mohan Varghese, the CMC Cardiothoracic Surgeon did a very difficult coronary bypass surgry - 4 blocks were bypassed with 4 grafts ! The next day early morning, the students were delighted to see their surgeon hero taking time to go with them to the Ash Heap Slums. He went around with the students and even took a short open-air teaching session on a person who had a surgical problem - a discharging sinus.

Vignette 2.

Dr. Manorama Verma, Professor and Head of Paediatric Medicine has just returned from U.S.A. and her last assignment was to see the New Pathway curriculum in Harvard Medical School which she did on April 30th. She went around with the students to each hut. In one hut Dr. Verma saw a girl child one and a half years old and the child had such advanced protein energy malnutrition, the girl child looked pale, emaciated, feeble breathing and weighing 4.1 kg. It was evident that the child needed immediate medical attention. The students and Dr. Verma asked the mother Kammu to take her to CMC hospital. During the afternoon feedback session the story of the child was related and the group was challenged that if that child Usha is not saved, this whole project on child survival is an exercise in futility! The two students checked in the children's ward and found out that

the girl child Usha was not admitted. The took an ambulance at 6-30 in the evening and went to the hut and bought Usha and the grateful parents into the hospital. Besides, severe malnutrition the girl child Usha had pneumonia, blood infection, diarrhoea and tuberculosis. Usha recovered from her near fatal complications and is on her Road to Recovery and was discharged on 1st June 1991, after 16 days in the hospital !

Vignette 3.

On May 28th, the field staff went family visiting and suddenly, a car pulled up and few people with guns came out and started firing in the air asking the slum dwellers to vacate the land saying that the land belonged to them. The land where they have their huts, some living there for upto 10 years, is disputed land as some of it is government land and the rest allegedly belongs to some farmers. Later we learned that they are the local mafia and the people were in great distress. By next day the people organized themselves and had series of meetings among themselves. The people approached the District and city officials who assured that their grievances will be looked into. This Socio-political situation is indeed a new learning experience for the students and the faculty.

Of the 454 families analysed manually so far, some of the salient features are :

Number of Underfive children - 307

Pregnant mothers detected - 39

Immunization status of 307 underfive children :

Vaccine received	Number	Percentage
BCG	15	4.91

DPT & Polio (3 doses)	16	5.2
Measles	0	0

Malnutrition among 307 underfive children as detected by weighing : 1st, 2nd & 3rd degree - 180 58.6

Immunization status of 39 pregnant women

Fully protected with 2 doses of tetanus toxoid - 0

Partially protected with one dose of TT - 1 (2.5%)

The Challenge is staggering ! Let us get on with it !

INFORMATION SUPPORT SYSTEM FOR PRIMARY HEALTH CARE IN URBAN SLUMS

Prepared by Dr (Mrs) Nalini Abraham, MD

1. INTRODUCTION

Christian Medical College, Ludhiana (CMCL) is undertaking an innovative Slums Project involving Primary Health Care (PHC) and Social Development at Ludhiana, covering a population of about 10,000. The project is meant to be a feasibility study for training of medical, nursing and para-medical students in delivery of PHC services. One of the key support areas of this project is a computer-based Epidemiological Database and Management Information System (MIS).

This proposal is being submitted for development of application software and related training and implementation assistance.

2. MAJOR FEATURES OF THE PROPOSED SYSTEM

The main features of the proposed system are the following :

- Provides training to the medical, nursing and para-medical students in the building up of an epidemiological data base and use of computerised MIS,
- Provides disease and health profiles to aid the teaching faculty in problem based medical education,
- Manual maintenance of records and registers would be eliminated,
- Ensures accuracy of data through in-built validation,
- Identifies eligibles for family planning, immunisation, micronutrients, etc.
- Identifies target groups and monitors them for continuity of care e.g. Antenatals, Infants, Postnatals,
- Selects and monitors high risk cases for special care,
- Identifies defaulters for TB, Leprosy, Immunization, etc.
- Keeps track of referral and follow-up of cases,
- Generates exception reports for supervisory action,
- Generates home-based epidemiological profile through household screening,
- Generates health indicators for impact analysis,
- Generates other social indicators to measure overall development, and
- Creates a database that could be used by the community, local government, health administrators and planners.

3. SCOPE OF THE PROJECT :

The project envisages the design and development of software for a computerised Information Support System for improved PHC delivery around the existing systems and procedures, and test implementation in one pilot slum of 10,000 population.

The project would broadly include the following :

- Analysis of Information Needs,
- Development of input and output formats,
- Preparation of an Operations Manual for the Computerised system,
- Development of software for PHC,
- Training
- Implementation Support in one pilot slum.

4. DESCRIPTION OF THE PROPOSED SYSTEM

The major benefits of the proposed PHC delivery system are given below :

- Monitors coverage through exception reporting,
- Identifies cases for referral and provides follow-up support,
- Monitors continuity of care paritcularly in the vulnerable segments of the population (e.g. pregnant women and infants),
- Follows up defaulters.
- Generates Population Based Epidemiology.
- Generates statistical analysis of data

- Highlights screened and "at risk" cases for effective follow-up,
- Provides lists for follow-up of resistant eligibles and treatment defaulters,
- Generates monitoring reports for :
  * Student performance,
  * Project performance
- Generates the following reports for Measure of Socio-economic Development :
  * Literacy rate,
  * Family assets.
- Identifies the poorest and marginalised for special assistance,

The major inputs to the system would be the following :

- Survey Schedules
  * General
  * Household
  * Individual
- Registers
  * Doctor's Clinic
  * MCH Clinic
- Service Oriented Instruments
  * Child Card
  * Antenatal Card
  * Treatment Card for TB, Leprosy, etc.
- Eligible Couple Card,
- Birth/Death/Marriage/Immigration/Outmigration form

5. TRAINING AND IMPLEMENTATION SUPPORT

All students and staff involved in this project would be trained in the use of the application software. Assistance would be provided for implementation of the application software during the project period.

Project Proposal Outline : A Draft.

A 3 year Private Sector Project

on

SUSTAINABLE CHILD SURVIVAL SCHEMES

Covering 10,000 families in urban slums :

An Intersectorial Education Experiment

Facilitating Development in 'Human Priority Sectors'

By strenghtening 'Social Infrastructure'

through

Community Oriented and Issue-Based Learning Activities.

A Project of The Christian Medical College, Ludhiana, Punjab, India.

In collaboration with The Government of India.

To be financed by :

A Consortium of invited Donors, National & International. Beginning in September/October 1991

OBJECTIVES

A 3 year Private Sector Project on 'Sustainable Child Survival Schemes' covering 10,000 families in the urban Slums of Ludhiana:

A. To establish an Educational Model that is relevant and responsible to India's and other developing countries health needs: through intersectorial, community oriented and issue-based learning activites; emphasizing development in human priority sectors' and by strengthening the social infrastructure'.

B. Collaborate with UNICEF and Government of India, Ministry of Health and Family Welfare and Ministry of Urban Development in implementing the Urban Basic Services programme which emphasizes the following priority areas: malnutrition; women's development activities; pre-school; day care and early childhood development activities; responsible parenthood and family planning services; support for abandoned and disabled children; water and sanitation.

C. Implement recommendations and policies that are made from time to time by the Government of India, UNICEF, WHO, UN, UNDP etc on child survival or related schemes.

D. To strive to achieve the alma Ata Decleration that emphasises:

1. Equitable distribution of health (and other) Services.
2. Comunity participation
3. Appropriate technology
4. Intersectorial approach.

The two participating communities are :

1. The Urban Slum community and

2. The student/teacher community drawn from all categories of medical and health sciences and related sectors.

The Educational experiment is to implement, through community oriented and issue-based learning activities, the key recommendations of the National Education Policy in Health Sciences' (The Bajaj Committee, 1989).

1. To socially motivate all categories of medical and health sciences, (with related intersectorial input) through this coordinated action Project.

2. To optimally interlock and interlink educational strategies and training with objectives of health delivery systems.

3. To establish the extremely essential inter-relations among all funtionaries of health manpower development and delivery.

'The Human Priority Sectors', according to the 1991 Human Development Report released on June Ist by the United Nations Development Programme (UNDP), are the following components of 'Social Infrastructure' that needs urgent strengthening in the Urban Slums since human deprivation; sociological, biological and ecological, and so on, is at its lowest rung in the Urban Slums.

1. Health, 2. Water, 3. Sanitation, 4. Daily caloric intake, 5. Adult Literacy; 6. Primary and secondary school enrolment, 7. Environment; ecology and afforestation, & 8. Family Planning.

These measures facilitate 'Human Development' by emphasizing human priority goals such as primary health care, water supply, family planning, basic education etc.

The proposed project focuses on The CHILD and the 'Child Survival' is the Grand Unifying Theme (GUT) to orchestrate the symphony of the students' and teachers' learning activites.

The students who will be admitted in 1991, 1992, and 1993 along with the faculty of Christian Medical College, form the core of the Health Sciences community.

There are about 200 students drawn from the medical, nursing, dental, pharmacy and medical laboratory technology courses. Each student will be responsible for 20 families; 4000 families a year and at least 10,000 families in 3 years.

Students and teachers will be invited from the Punjab Agricultural University, situated 5 kilometers away, having faculties in agriculture, agriculture engineering, food and nutrition, child development, education, journalism and management. Selected teachers and students from other colleges in town will also be involved.

Phase I :

Each of the 200 students will be responsible for 20 families and will work as a team with students of other faculties and other colleges.

Baseline data on all the above 7 components will be gathered in the first 2 weeks of September/October 1991 with 4 or 5 visits to the urban slums.

Phase II :

Analysis of data, discussion, debate and decisions on actions and monitoring those actions, will be done with the help of the Field staff of the respective 7 components. The visits to the Urban slums by the students and teachers will be every fortnight for 6 months and

subsequently, once a month for 12 months. The services in all the seven components will be facilitaed by the respective Field staff also drawn from different sectors.

Phase III :

Evaluations of the Project with special emphasis on sustainability will be carried out by the urban slum community, students and teachers, citizens and experts in each field, during the last 3 months of the Project year i.e. July, august and September. The cycle is repeated for the 1992 and 1993 batch.

Phase IV :

Sustainability monitoring of the 'Child Survival Schemes' will be for 2 years for the students that will be admitted in 1991 and for 1 year for the students to be admitted in 1992.

Besides evaluating and monitoring the well known, health, social, economic and ecological and other INDICIES, the Human Development Index (HDI) and the Human Freedom Index (HFI) described in the 1991 UNDP Report will also be evaluated and monitored.

The Predicted Outcomes and Beyond 1994 :

Of the 200 students admitted to Christian Medical College, from 1991, three out of four students will execute a Service Contract to go to rural, underserved, unreached or tribal areas of this vast land of India. Hence the New Educational Model producing a new breed of Health Activists in all sectors will train many others resulting in a cascading Multiplier Effect.

The resulting New Eductional Modeal tested, tried and refined in the ninties will be ready to be launched as a New Paradigm in Health

Sciences education of the 21st centuary.

References :

1. National Education policy in Health Sciences, submitted by: Prof. J.S. Bajaj, Chairman, Consultative group: Members: Drs. Harcharan Singh, O.P. Ghai, B.S. Chaubey, Mehdi Hassan; Member Secretary: Dr. Ira Ray.

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3. WHO/UNICEF (1978) alma-Ata 1978: Primary Health Care, Report of the International conference, WHO Geneva.

Ash-heap Slum in the Motinagar Area of Ludhiana

INTRODUCTION :

The population that has been surveyed over the past one and half months reside in an area of 1000 meters North-South and 200 meters East-West opposite the Vardhaman Mills on the Ludhiana-Chandigarh highway about 4 km from the Christian Medical College campus.

Until 10 years ago this land was a low lying area, but since then the surrounding mills have been dumping their waste like coal and rice-husk ash in this area.

The people settled in this area are a group of immigrants from Uttar Pradesh, Bihar and Rajasthan and some from Maharashtra, Madhya Pradesh, Nepal and Haryana, bringing with them their customes and cultural beliefs, eating habits and behavioural patterns.

During the survey it has been noticed that people from a particular state stay together. A total of 1470 families were surveyed and 249 houses were found locked after repeated effort to get to those families. The reason being, many men have left their families back home and they have gone to visit them during the summer break.

The total population covered is 4488 with the male female ratio being 1000: 644. This low male: female ratio is again due to the fact that many men have left their families back home while they work in the factories and regularly send home money.

The survey also showed daily wages labourers and factory workers together comprised 74%. The rest consisted of cobblers (mainly from Rajasthan) shop keepers, venders, flower sellers, rickshaw pullers, animal rearers and so on.

A total of 2602 were adults among them and 740 were literate (28.44%). Of these 740 literate, 678 were men and 62 were women.

Among the literate men there is a teacher who is M.A., B.Ed. and 6 had B.A. degrees, (4 from Bihar and 2 from U.P.) and one B.Com. from U.P. There is also one resident Registered Medical Practitioner who also works as a mechanic during the day shift.

There is an ongoing adult literacy programme that needs to be strengthened. About 98% of the families live below the poverty line.

About 6% of the pregnant mothers received tetanus toxoid. Among the children, immunization status did not exceed 5% for any single vaccination.

The community surveyed was apprehensive about our visits for the base line survey as it coincided with the local and state election and rumous of forceful evacuation.

The health care services and immunization programmes have already started to improve the immunization status among the slum children and pregnant mothers. The community has responded in a very enthusiastic manner beyond our expectations.

On 18th June, 1991 the Dais/community health worker training started for the 20 women who volunteered from this community. Every Tuesday from 9AM to 1PM they will be trained till September 30th, 1991.

Detailed base-line Data

1.	Number of families surveyed:	1470
2.	Number of housed found locked	249
3.	Total population covered	4488

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	Males	2730
	Females	1758
	Male : Female Ratio	1000:644
4.	Adults above 18 years (M+F)	2602
	Literacy rate	740 (28.4%)
	A. Total male adults	1667
	Male literacy	678 (40.6%)
	B. Total female adults	935
	Female literacy	62 (6.6%)
5.	They come from the following States :	
	Uttar Pradesh	568 (47%)
	Bihar	230 (19%)
	Rajasthan	163 (14%)
	Punjab	48 (4%)
	Haryana	43 (3.5)
	Nepal	22 (1.8%)
	Maharashtra	19 (1.6%)
	Madhya Pradesh	15 (1.2%)
	Others	113 (9.2%)
6.	Occupation/Job.	
	Daily wages labourers	903 (74%)
	and Factory Workers.	
	Miscellaneous	318 (26%)
7.	Baseline data of pregnant Mothers :	
	Total pregnant Mothers detected:	88
A.	Fully protected with tetanus toxoid (2 doses)	5. (5.7%)
	Partially immunized with tetanus toxoid (1 dose)	5. (5.7%)
	Unimmunized mothers	78 (88.6%)
B.	Pregnancy order (gravida)	
	First gravida	23 (26.1%)
	Second gravida	19 (21.6%)
	Third gravida	21 (23.9%)
	Fourth gravida	12 (13.6%)

	Fifth gravida plus	13 (14.8%)
C.	Age of the mother :	
	Below 18 years	9 (10.2%)
	18 to 30 years	65 (73.9%)
	Above 30 years	14 (15.9%)
D.	Stage of pregnancy (Trimester)	
	Ist trimester	25 (28.4%)
	2nd trimester	25 (28.4%)
	3rd trimester	38 (43.2%)
8.	Baseline data of Children under five years :	
	Total number of children	680
	Male : Female ratio	350:330 (1000:943)
	A. Immunization status of 0-5 years	
	B.C.G.	24 (3.5%)
	DPT/OPV	
	Fully protected-3 doses	28 (4.12%)
	Only 2 doses	6 (0.8%)
	Only 1 dose	5(0.7%)
	Measles	1 (0.15%)
	B. Immunization status of 0-1 years	
	Total Number	168
	B.C.G.	8 (4.7%)
	DPT/OPV	
	Fully protected-3 doses	5 (2.9%)
	Only 2 doses	5 (2.9%)
	Only 1 dose	1 (0.6%)
	Measles	0 (0%)
	C. Immunization status of 1-2 years	
	Total Number	150
	B.C.G.	3 (2%)
	DPT/OPV	
	Fully protected-3 doses	7 (4.7%)

	Only 2 doses	0 (0%)
	Only 1 dose	1 (0.7%)
	Measles	0 (0%)
D.	Immunization status of 2-5 years	
	Total number	362
	B.C.G.	13 (3.6%)
	DPT/OPV	13 (3.6%)
	Fully protected-3 doses	16 (4.4%)
	Only 2 doses	3 (0.8%)
	Only 1 dose	3 (0.8%)
	Measles	1 (0.3%)
9.	Baseline Data of the Family Planning status.	
	Married women 15 years- menopause (Eligible Couple)	805 (17.9%)
	Vasectomy	6
	Tubectomy	21
	IUCD	3
	Conventional Contraceptive	1
	Oral pills	2
	Total family planning coverage	33 (4.10%)
	Effective Family Planning coverage	32.35 (4.01%)

This data is processed and analyzed manually by the senior and junior faculty of the Dept. of Social & Preventive Medicine and Community Health.

We lost a few working days due to contrinuing disturbances and bandhs when no shops are open and very little travel is possible. It took us and the nation atleast a week to recover from the numbing shock, the terrible tragedy that took place on May 21st, 1991.

The job at hand appears insurmountable but let us get on with it !

Final acknowledgements are due to Dr. Tejinder Singh for getting this document printed at an extremely short notice.